

documents submitted with the Information Disclosure Statement, namely D. Koller and M. Sahami, "Hierarchically Classifying Documents Using Very Few Words," International Conference on Machine Learning, 1997, pp. 170-178, was considered. Applicants respectfully request that the Examiner properly consider this document, initial the attached Form-1449, and return a copy of the initialed Form-1449 to Applicants.

Claims 1, 2, and 6-10 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by CONKLIN et al. Applicants respectfully traverse this rejection.

CONKLIN et al. is directed to an information retrieval system that processes user input queries and identifies query feedback, including ranking the query feedback, to facilitate the user in re-formatting a new query (Abstract).

In contrast, the present invention recited in independent claim 1, for example, includes a combination of features, including receiving a search query, retrieving one or more objects in response to the search query, determining whether the search query corresponds to at least one query theme of a group of query themes, ranking the one or more objects based on a result of the determination, and providing the ranked one or more objects. CONKLIN et al. does not disclose or suggest this combination of features.

For example, CONKLIN et al. does not disclose determining whether the search query corresponds to at least one query theme of a group of query themes and ranking one or more objects based on a result of the determination. The Examiner relied on col. 3, lines 25-30, and col. 4, lines 1-8, of CONKLIN et al. for allegedly disclosing determining whether the search query corresponds to at least one query theme of a group of query themes and on col. 3, lines 1-24, of CONKLIN et al. for allegedly disclosing

ranking one or more objects based on a result of the determination (Office Action, pg. 3).

Applicants submit that these sections of CONKLIN et al. do not disclose these features of claim 1.

Col. 3, lines 25-30, of CONKLIN et al. discloses:

In one embodiment, to process the query, the information retrieval system selects a plurality of documents relevant to said query, and then selects one or more themes from said documents, wherein said themes define at least a portion of the thematic content of said documents. Thus, for this embodiment, the topics are the themes from the document hit list.

This section of CONKLIN et al. does not disclose or suggest determining whether the search query corresponds to at least one query theme of a group of query themes.

Instead, this section of CONKLIN et al. discloses that a plurality of documents is selected that is relevant to a user query and then one or more themes are selected from the documents. One skilled in the art would appreciate that this is quite different from determining whether a search query corresponds to at least one query theme from a group of query themes.

Col. 4, lines 1-8, of CONKLIN et al. discloses:

For theme queries, the query processing 175 processes the input user query to identify the thematic content of the query. Specifically, a content processing system 110 (FIG. 7) analyzes the words or terms in the query to generate a query theme vector. In general, the query theme vector presents a thematic profile of the content in the query. A further discussion of theme vectors is described more fully below in the section "Content Processing System."

This section of CONKLIN et al. discloses the generation of a query theme vector based on terms in a theme query. CONKLIN et al. does not disclose or suggest, however, that, in response to a theme query, the CONKLIN et al. system ranks one or more objects

based on the theme vector. In fact, this section of CONKLIN et al. seems to disclose that the result of a theme query is simply the query theme vector.

CONKLIN et al. discloses the query processing 175 processing theme queries and text queries (col. 3, lines 66-67). As set forth above, for a theme query, a content processing system 110 analyzing the terms in the query and generates a query theme vector in response thereto (col. 4, lines 1-6). For a text query, on the other hand, CONKLIN et al. discloses that the query processing 175 does not analyze the text in the query to ascertain the thematic content, but rather uses the query terms to process the query (col. 4, lines 9-12). CONKLIN et al. does not disclose or suggest that the theme queries or text queries include determining whether the search query corresponds to at least one query theme of a group of query themes AND ranking one or more objects based on a result of the determination, as recited in claim 1.

Col. 2, line 66, to col. 3, line 24, of CONKLIN et al. discloses:

An information retrieval system processes user input queries, and identifies query feedback, including ranking the query feedback, to facilitate the user in re-formatting a new query. The information retrieval system includes a knowledge base that comprises a plurality of nodes, depicting terminological concepts, arranged to reflect conceptual proximity among the nodes. The information retrieval system processes the queries to identify a document hit list related to the query, and to generate query feedback terms. Each document includes a plurality of themes or topics that describes the overall thematic content of the document. The topics or themes are then mapped or linked to corresponding nodes of the knowledge base. At least one focal node is selected from the knowledge base, wherein a focal point node represents a concept, as defined by the relationships in the knowledge base, conceptually most representative of the topics or themes. The query feedback terms are also mapped or linked to nodes of the knowledge base. To identify a ranking for the query feedback terms, the information retrieval system determines a conceptual proximity between the focal nodes and the nodes that represent the query feedback terms, and ranks the

query feedback terms from a first term closest in conceptual proximity to the focal nodes to a last term furthest in conceptual proximity from the focal nodes. The query feedback terms are then displayed to the user in the order ranked.

This section of CONKLIN et al. discloses the ranking of query feedback terms and not, as recited in claim 1, ranking one or more objects that are retrieved in response to a search query based on a result of the determination of whether the search query corresponds to at least one query theme in a group of query themes.

Applicants further submit that CONKLIN et al. does not disclose providing the ranked one or more objects, as also recited in Applicants' claim 1. The Examiner relied on col. 3, lines 1-24, of CONKLIN et al. for allegedly disclosing this feature and alleged that "the query feedback terms are then displayed to the user in the order ranked" (Office Action, pg. 3). Applicants submit that the Examiner has misinterpreted this feature of claim 1.

The Examiner alleged that the retrieving of one or more objects in response to the search query corresponds to CONKLIN et al.'s teaching of retrieving documents (Office Action, pg. 3). The Examiner also alleged that providing the ranked one or more objects correspond to CONKLIN et al.'s alleged teaching of providing query feedback terms (Office Action, pg. 3). It is unclear as to how, as alleged by the Examiner, the one or more objects can correspond to documents and at the same time correspond to query feedback terms. The disclosure of CONKLIN et al. does not support the Examiner's position. Applicants submit that CONKLIN et al. does not disclose providing the ranked one or more objects, as recited in Applicants' claim 1.

A proper rejection under 35 U.S.C. § 102 requires that the reference teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. Since, as set forth above, CONKLIN et al. fails to disclose determining whether the search query corresponds to at least one query theme of a group of query themes, ranking one or more objects based on a result of the determination, and providing the ranked one or more objects, Applicants respectfully submit that the rejection of claim 1 under 35 U.S.C. § 102(e) as anticipated by CONKLIN et al. should be reconsidered and withdrawn.

For at least the foregoing reasons, Applicants submit that claim 1 is not anticipated by CONKLIN et al.

Claims 2, 6, and 7 depend from claim 1. Therefore, these claims are not anticipated by CONKLIN et al. for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features not disclosed by CONKLIN et al.

For example, claim 2 recites that the objects include web pages. The Examiner relied on col. 2, lines 10-11, of CONKLIN et al. for allegedly disclosing this feature (Office Action, pg. 3). Applicants submit that this section of CONKLIN et al. does not disclose or suggest the recited feature.

Col. 2, lines 10-11, of CONKLIN et al. corresponds to the background section of CONKLIN et al. and discloses "[a]n on-line world wide web surfer is an example of such a user." While this section of CONKLIN et al. uses the phrase "world wide web," this section of CONKLIN et al. does not disclose or suggest that CONKLIN et al.'s information retrieval system 100 retrieves and ranks web pages.

For at least this additional reason, Applicants submit that claim 2 is not anticipated by CONKLIN et al.

Claim 6 recites determining whether the search query corresponds to a query rule associated with each query theme. The Examiner relied on col. 6, lines 1-67, of CONKLIN et al. for allegedly disclosing this feature and alleged that "query rule reads on cluster analysis" (Office Action, pg. 3). Applicants submit that CONKLIN et al.'s cluster analysis in no way relates to the recited query rule.

CONKLIN et al. discloses that in order to identify a focal category, the information retrieval system 100 identifies one or more clusters of themes, as they are linked in the knowledge base 155 (col. 6, lines 34-37). The clustering of themes is performed by the cluster analysis 190 (col. 6, lines 37-39). CONKLIN et al. defines a cluster of themes as occurring "where a plurality of themes are located in relatively close proximity when linked in the knowledge base" (col. 6, lines 53-55). Contrary to the Examiner's position, CONKLIN et al. does not disclose or suggest that the clustering of themes corresponds to determining whether the search query corresponds to a query rule associated with each query theme.

For at least this additional reason, Applicants submit that claim 6 is not anticipated by CONKLIN et al.

Independent claims 8-10 include features similar to those described above with respect to claim 1. Therefore, Applicants submit that claims 8-10 are not anticipated by CONKLIN et al. for reasons similar to those given above with respect to claim 1.

Claims 3-5 and 11-22 were rejected under 35 U.S.C. § 103(a) as unpatentable over CONKLIN et al. in view of CHAKRABARTI et al. Applicants respectfully traverse this rejection.

CHAKRABARTI et al. is directed to a method for interactively creating an information database (Abstract).

Claims 3-5 depend from claim 1. Applicants submit that the disclosure of CHAKRABARTI et al. does not remedy the deficiencies set forth above with respect to the disclosure of CONKLIN et al. Accordingly, Applicants submit that claims 3-5 are patentable over CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features that are neither disclosed nor suggested by CONKLIN et al. and CHAKRABARTI et al.

For example, claim 3 recites determining whether any of the one or more objects relates to a list of favored and non-favored sources. The Examiner admitted that CONKLIN et al. does not disclose this feature and relied on col. 1, lines 30-50, of CHAKRABARTI et al. for allegedly disclosing the feature (Office Action, pg. 5). More specifically, the Examiner alleged that "favored reads on example pages and non-favored sources reads on stop pages" (Office Action, pg. 5). Applicants submit that the Examiner has mischaracterized the CHAKRABARTI et al. disclosure.

Col. 1, lines 30-50, of CHAKRABARTI et al. discloses:

In further detail, the method features steps for enabling a user to interactively define a frame-based, hierarchical information structure for cataloging information, and, steps for identifying information elements to populate respective frames of the structure by iteration, the iteration

including steps for: identifying a preliminary population of information elements with the use of a search query based on respective frame attributes, frame attributes selectively including classification designations, example pages, stop pages and/or control parameters used by conventional search engines, as required; supplementing preliminary population based on usage of example pages and/or stop pages; expanding the supplemented preliminary population to include related information; automatically filtering and computing information element ranking based on degree of relevance to the respective frame; and, thereafter, refining the identification with successive iterations of the steps described until identification is deemed complete, whereupon the hierarchical structure is populated with a user-defined portion of preferred information elements identified.

This section of CHAKRABARTI et al. discloses that a hierarchical information structure may be populated by a user through the use of a search query that includes, *inter alia*, example pages and stop pages. Assuming, as alleged by the Examiner, that CHAKRABARTI et al.'s example pages and stop pages correspond to favored and non-favored sources, respectfully, Applicants submit that CHAKRABARTI et al. does not disclose or suggest determining whether any of the retrieved one or more objects relates to a list of example pages and stop pages. To the contrary, CHAKRABARTI et al. merely discloses that a search query may include example pages and stop pages to supplement an initial set of pages retrieved in response to the search query.

For at least these additional reasons, Applicants submit that claim 3 is patentable over CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination.

Independent claim 11 recites developing one or more query themes, identifying, for each query theme, a first set of objects as favored objects, identifying, for each query theme, a second set of objects as non-favored objects, and determining an editorial

opinion parameter for each of the objects in the first and second sets. Applicants submit that CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination, do not disclose this combination of features.

For example, CONKLIN et al. and CHAKRABARTI et al. do not disclose developing one or more query themes. The Examiner relied on col. 3, lines 25-30, and col. 4, lines 1-8, of CONKLIN et al. for allegedly disclosing this feature (Office Action, pg. 8). Applicants submit that these sections of CONKLIN et al. do not disclose or suggest the recited feature.

As set forth above, col. 3, lines 25-30, of CONKLIN et al. discloses that an information retrieval system processes a query by selecting a plurality of documents relevant to the query and then selecting one or more themes from the documents. This section of CONKLIN et al. does not disclose developing one or more query themes, but merely that one or more themes are selected from documents.

Col. 4, lines 1-8, of CONKLIN et al. discloses, as set forth above, that for theme queries, a content processing system 110 analyzes the terms in the theme query to generate a query theme vector. CONKLIN et al. discloses that a theme vector identifies themes for each individual document, as well as a theme strength corresponding to each theme (col. 4, lines 40-43). Therefore, it is apparent that a theme vector is not a query theme, but rather contains themes. CONKLIN et al. does not disclose or suggest developing one or more query themes.

Applicants further submit that CONKLIN et al. and CHAKRABARTI et al. do not disclose identifying, for each query theme, a first set of objects as favored objects and

a second set of objects as non-favored objects, as also recited in claim 11. The Examiner admitted that CONKLIN et al. does not disclose these features and alleged that CHAKRABARTI et al.'s example authorities and stop pages correspond to the recited favored and non-favored objects, respectively (Office Action, pg. 8). Applicants submit that the Examiner has mischaracterized the disclosure of CHAKRABARTI et al.

CHAKRABARTI et al. discloses that when a search query specifies example authorities, these pages are added to supplement an initial set of pages retrieved in response to the search query (see, for example, col. 26, lines 49-55). When the search query specifies stop pages, the initial set of pages is supplemented by deleting the specified stop pages (col. 26, lines 55-63). CHAKRABARTI et al. does not disclose or suggest identifying, for each query theme, a first set of objects as example authorities and a second set of objects as stop pages. To the contrary, CHAKRABARTI et al. merely discloses the ability to supplement a search query by including example authorities and stop pages in the search query.

The Examiner further alleged that "theme reads on hierarchical information classification" and relied on col. 12, lines 4-23, of CHAKRABARTI et al. for support (Office Action, pg. 8). Applicants respectfully disagree.

Col. 12, lines 4-23, of CHAKRABARTI et al. discloses:

Further, following developments of the frame-based, hierarchical, information classification structure at step 4, method 2 is seen to include step 6 for enabling the user to select; i.e., randomly access, the information frame from the classification hierarchy he wishes to populate with information elements; e.g., Web pages.

Following user selection of the hierarchical classification frame to be populated, at step 6, method 2 includes step 8 for enabling the automated

retrieval of information elements; e.g. Web pages, from the information source; e.g., the Web, for populating the selected frame. Thereafter, method 2 includes step 10 for prompting the user to indicate whether there are any other frames in the information classification hierarchy the user would like to populate with information. If the user indicates, there are additional frames of the classification hierarchy to be populated, method 2 returns at branch 12 to select frame step 6, where the user is again permitted to designate a frame to be populated, followed by subsequent transition to step 8 for enabling automated retrieval of information for the newly selected frame.

The mere fact that CHAKRABARTI et al. discloses that the database can have a hierarchical information classification structure in no way supports the Examiner's position that this hierarchical information classification structure corresponds to a query theme.

For at least the foregoing reasons, Applicants submit that claim 11 is patentable over CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination.

Claims 12-19 depend from claim 11. Therefore, Applicants submit that these claims are patentable over CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 11. Moreover, these claims recite additional features not disclosed by CONKLIN et al. and CHAKRABARTI et al.

For example, claim 12 recites determining, for each query theme, one or more rules for determining whether a search query satisfies the respective query theme. The Examiner relied on col. 6, lines 1-67, of CONKLIN et al. for allegedly disclosing this feature and alleged that "query rule reads on cluster analysis" (Office Action, pg. 9). Applicants respectfully disagree.

As set forth above with respect to claim 6, CONKLIN et al. discloses that in order to identify a focal category, the information retrieval system 100 identifies one or more clusters of themes, as they are linked in the knowledge base 155 (col. 6, lines 34-37). The clustering of themes is performed by the cluster analysis 190 (col. 6, lines 37-39). CONKLIN et al. defines a cluster of themes as occurring "where a plurality of themes are located in relatively close proximity when linked in the knowledge base" (col. 6, lines 53-55). Contrary to the Examiner's position, CONKLIN et al. does not disclose or suggest that the clustering of themes corresponds to determining one or more rules for determining whether a search query satisfies the respective query theme.

For at least this additional reason, Applicants submit that claim 12 is patentable over CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination.

Independent claims 20 and 21 recite features similar to those described above with respect to claim 11. Therefore, Applicants submit that claims 20 and 21 are patentable over CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination, for reasons similar to those given above with respect to claim 11.

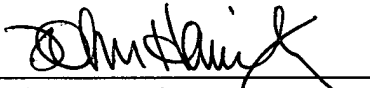
Claim 22 depends from claim 21. Accordingly, Applicants submit that this claim is patentable over CONKLIN et al. and CHAKRABARTI et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 21.

In view of the foregoing remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectively submitted,

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